MODIS TECHNICAL TEAM MEETING

December 22, 1994

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were David Herring, Steve Ungar, Harry Montgomery, Dorothy Hall, Wayne Esaias, Bruce Guenther, Yoram Kaufman, John Barker, and Dick Weber.

1.0 SCHEDULE OF EVENTS

Dec. 31	**Revisions of ATBDs receiving a grade of C or D due to EOS Project Science Office**
Jan. 15	Semi-annual reports due to Barbara Conboy
Feb. 20	MODIS Ocean Discipline Group Meeting, in Miami, FL
Feb. 21 - 24	Workshop on international Calibration / Validation Efforts for EOS Ocean Color Sensors, in Miami, FL
May 2	MODIS Calibration Working Group (tentative)
May 3 - 5	MODIS Science Team Meeting (tentative)

2.0 MINUTES OF THE MEETING

2.1 MCST Reports

Guenther delivered the MODIS Level 1B Calibration ATBD to Salomonson (see Attachment 1). Salomonson asked if any progress has been made on getting the Level 1B calibration algorithm published in a refereed journal. Guenther responded negatively. MCST's next step is to produce a text version of the ATBD that looks like a technical memorandum, which should be done by February 1995.

2.1.1 New MCST and SDST Support Contractor Signed

Guenther reported that GSFC signed a new support contract with General Sciences Corporation (GSC) last Friday; task assignments were delivered that same day. Research and Data Systems Corp. (RDC) held the contract previously. To smooth the transition, on January 5, 6, 9, and 10 MCST will hold a workshop at which an overview of MCST's goals, objectives, and works in progress will be given. Also, new team members will be briefed on their new roles within MCST.

Guenther said the new contract stipulates that the contractor has a 20 percent subcontract goal to disadvantaged businesses. He expects GSC to announce their subcontract plans by Friday, Dec. 30.

2.2 MODIS Project Reports

Weber reported that the electronics of the MODIS Engineering Model (EM) is now working with the software.

He noted that rate of the loss of personnel—due to the impending move from Santa Barbara to El Segundo—has slowed. This may be because the relocation has been rescheduled until after completion of the Protoflight Model (PFM).

Barker asked Weber when SBRC plans to begin taking test data on the EM. In January, Weber responded. He said the polarization test will be conducted first.

2.3 BOREAS Update

Ungar reported that he attended last week's BOREAS Meeting. The results of preliminary analyses of data from the BOREAS campaign are forthcoming. Ungar stated that the MODIS Airborne Simulator (MAS) performed superbly on the C-130. He showed some sample images taken over Candle Lake that show surface temperature measurements accurate to ± 0.5° C.

Ungar said that Piers Sellers and Forrest Hall, BOREAS Team Leaders, may request additional flights of MAS on the C-130 for winter and summer campaigns in 1995.

2.4 SCAR-B Experiment Plans Proceeding

Kaufman announced that plans for an August 1995 SCAR (Smoke, Clouds, and Radiation) campaign in Brazil are progressing. Bob Curran has taken the lead on international coordination issues with Brazil, as well as SCAR-B experiment management and funding. Curran replaces Tim Suttles in this role. Kaufman stated that the Brazilia airport was deemed suitable for the NASA ER-2.

2.4.1 Calibration Over High Fire Temperatures

Kaufman said he experienced problems calibrating the MAS during the SCAR-C campaign due to high fire temperatures. Kaufman is concerned that this may be problem later for MODIS and inquired as to the calibration procedure before launch. Montgomery responded that MCST can track its spectral response up to 350K, and then will extrapolate anything above that temperature. He reminded the Team that the blackbody, due to its anodization, crazed when it was heated to 380K. Montgomery admitted that there will be some error in the extrapolation (less than 10 percent), but we cannot heat the blackbody above 350K.

Kaufman asked that this issue be further investigated by MCST. Salomonson agreed, asking Guenther and Montgomery to take the lead on exploring the issue further.

2.5 MAST Reports

Herring reported that the dates for the next MODIS Science Team Meeting are now set for May 3 - 5. The meeting will be held at a site near GSFC. Herring announced the guest speaker for the next MODIS Banquet will be Ted Kaehler, a senior computer scientist at Apple Computer and a member of their Advanced Technology Group. Kaehler's presentation, entitled "Nanotechnology—Going to the Limit with Atoms," will focus on mankind's approaching technological

capability to build devices and structures that have every single atom in the proper place. Kaehler founded The Assembler Multitude, a special interest group of computer professionals that meets biweekly to discuss the technical progress and social implications of nanotechnology.

3.0 ACTION ITEMS

1. *Guenther and Montgomery:* Evaluate the calibration accuracy for the high temperature channels.

3.1 Action Items Carried Forward

2. *MODIS Team*: Determine how, given the MODIS bowtie effect, MODIS images will be produced at launch. [This may be a suitable topic for discussion at the next Science Team Meeting.]
3. *Fleig and Ungar*: Interact with the group leaders prior to developing a MODIS data simulation plan for review at the next Science Team Meeting. [Work on this item is still in progress.]
4. *Masuoka*: Develop a set of comments from MODIS on the third version of the Quality Assurance plan and forward to the Team Leader for review.

4.0 ATTACHMENTS

NOTE: All attachments referenced below are maintained in MODARCH and are available for distribution upon request. Please contact David Herring, MAST Technical Manager, at (301) 286-9515, Code 920, NASA/Goddard Space Flight Center, Greenbelt, MD 20771 if you desire copies of any attachments.

1. MODIS Level 1B Calibration ATBD, by MCST